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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/387,534	08/31/1999	FELIKS DUJMENOVIC	0100.9901020	2713

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EXAMINER

SHANG, ANNAN Q

ART UNIT	PAPER NUMBER
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2614

DATE MAILED: 04/08/2004

21

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/387,534

Applicant(s)

DUJMENOVIC ET AL.

Examiner

Annan Q Shang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,8,10 and 11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,8,10 and 11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 02/12/04 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 and 3, are rejected under 35 U.S.C. 103(a) as being unpatentable over **Dangschat (5,173,777)** in view of **Griffin et al (5,606,612)**, and further in view of **Bugwadia et al (6,229,570)**.

As to claims 1, note the **Dangschat** reference figure 1, discloses a circuit configuration for inset-image keying in a television set having only one tuner and further discloses a method of tuning a system. The claimed method comprising... is met as follows:

the claimed "tuning a video tuner to a first frequency" is met by Tuner 1 (fig. 1, col. 4, line 34-col. 5, line 2 and line 14-40), note that Tuner 1 "a video tuner" switches

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over two frequencies, i.e., tunes to a first frequency, and receives an image or picture "first field of video" on the first frequency, stores in half-frame memory device 8 and displays as LARGE IMAGE A on Screen 30 of a television set (col. 5, lines 41-62); and after displaying LARGE IMAGE A, tunes the a second frequency, receives an image or picture on the second frequency, stores in half-frame memory device 8 and display as SMALL IMAGE B on Screen 30 of the television set.

Dangschat further discloses where the period of time in which switchover device 4 switches to the small-image signal route 20 is selected to be precisely long enough for tuner 1 to jump to the tuning frequency for the second program, for a new half image to be inscribed in the small-image memory device 6 and for the tuning frequency of tuner 1 to jump back to the first program, note col. 5, line 55-col. 6, line 17, but fails to explicitly teach switching over between frequencies when a video blanking interval is detected in the video signal, and interpolating video data between the first field of video on the first frequency and second field of video on the first frequency and displaying the interpolated video data on a display device and displaying the second field of video data on the first frequency.

However, note **Griffin et al** reference figure 7, disclose a Receiver 159, which receives a video signal, and VBI detector 160, that detects VBI sync word in the received video signal and delivers pulse signal to a digital logic circuit 176 to control a RAM Controller Logic 177 to control the reading and writing of frames of video signal to RAMs 166 or 168 (fig. 7, col. 11, line 66-col. 12, line 11, lines 31-53 and col. 13, lines 40-64).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teaching of Griffin into the system of Dangschat to provide a VBI detector to detect VBI and switch to from one frequencies to the other to store frames or pictures of the frequencies, thereby prevent interfering with the video signals or frames or the active video portion of the signal.

Dangschat as modified by Griffin fail to explicitly teach interpolating video data between the first field of video on the first frequency and second field of video on the first frequency and displaying the interpolated video data on a display device and displaying the second field of video data on the first frequency.

However, note **Bugwadia et al** reference figures 1-4, disclose motion compensation image interpolation-frame rate conversion for HDTV where missing frames or fields in video signal are interpolated to obtain a full motion video (figs. 1-4, col. 3, lines 7-18, line 35-46, col. 4, lines 54-65, col. 5, lines 10-22 and col. 6, lines 16-34).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teaching of Bugwadia into the system of Dangschat as modified by Griffin to interpolate missing frames or fields to obtain blurr-free high-quality image data or full motion video.

As to claims 3, Dangschat further inherently teaches providing a second frequency indicator to the tuner 1 prior to the step of tuning tuner 1 to a second frequency (col. 4, lines 34-43), note that the switching over between the two frequencies

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is accomplished by a control signal which may be stored in a control device 9 to provide the necessary frequency indicator or control signal.

Claim 8, the method is composed of the same structural elements that were discussed in the rejections of claim 1.

Claim 11, is met as previously discussed with respect to claim 1.

4. Claims 4 and 10, are rejected under 35 U.S.C. 103(a) as being unpatentable over **Dangschat (5,173,777) in view of Griffin et al (5,606,612) and Bugwadia et al (6,229,570)** as applied to claims 1 and 8 above, and further in view of **Izumi (6,233,227)**.

As to claims 4 and 10, Dangschat as modified by Griffin and Bugwadia, teach alternating display of fields of video from the first frequency and second frequency includes alternating reception of tuner 1 in a time maximum of 100 msec (col. 6, lines 15-17), but, fails to explicitly teach alternating reception in approximately 1.2 milliseconds.

However, **Izumi** teaches transmitting and receiving apparatus, where transmission and reception changeover switch 113, alternates frequencies in 1 millisecond (figures 1, 7, col. 3, line 63-col. 4, line 5 and col.7, lines 11-20).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teaching of Izumi into the system of Dangschat as modified by Griffin and Bugwadia to provide a switch or controller that can switch between frequencies in a millisecond and accurately receive information accordingly.

Response to Arguments

5. Applicant's arguments with respect to claims 1, 3, 4, 8, 10 and 11, have been considered but are moot in view of the new ground(s) of rejection discussed above. The rejection of claims 1 and 8, under 35 U.S.C. 112, first paragraph, has been removed since the claimed language "adjacent in time" has been deleted from claims 1 and 8. This is a Non-Final Office Action.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Prange et al (6,480,542) disclose method for decoding compressed video data with a reduced memory requirement.

Chang et al (6,260,193) disclose synchronization of decoders in a bi-directional CATV network.

Jenkin et al (5,940,444) disclose DARS PSF with no data rate increase.

Kato et al (5,905,704) disclose data reproducing apparatus for reproducing data from sector units of a recording medium.


Shackleton et al (5,410,358) disclose method and device for frame interpolation of a moving image.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Annan Q Shang** whose telephone number is **703-305-2156**. The examiner can normally be reached on **700am-500pm**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **John W Miller** can be reached on **703-305-4795**. The fax phone number for the organization where this application or proceeding is assigned is **703-872-9306**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the **Electronic Business Center (EBC)** at **866-217-9197 (toll-free)**.

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